

In the claims

Claim 1 (currently amended): A supported catalyst for the selective hydrogenation of unsaturated compounds comprising ~~a supported catalyst comprising~~ (1) Pd or a Group 8 metal component comprising Pd and one other Group 8 metal and (2) at least two metals selected from the group consisting of Ag, Zn ~~or~~ and Bi.

Claim 2 (currently amended): The catalyst according to claim 1 comprising a group 8 metal component comprising Pd and one other Group 8 metal.

Claim 3 (currently amended): The catalyst according to claim 2 wherein said Group 8 metal is selected from the group consisting of Pt, Ir, Ru, Co ~~or~~ and Ni.

Claim 4 (original): The catalyst according to claim 1 comprising Ag and at least one of Zn or Bi.

Claim 5 (currently amended): The catalyst according to claim 1 wherein said catalyst is supported on a support which is highly porous having average pore diameter larger than about 180Å, no pores narrower than 35 Å, total pore volume larger than about 0.65 cc/g, and ~~preferably less than about 100 m²/g~~ BET surface area less than about 100 m²/g.

Claim 6 (original): The catalyst according to claim 1 comprising K.

Claim 7 (original): The catalyst according to claim 1 wherein Pd is in the range of 0.005 to 1% by weight; Ni is in the range of 0.0 to 15% by weight; Ag is in the range of 0.002 to 20% by weight; Zn is in the range of 0 to 5% by weight and Bi is in the range of 0 to 5% by weight.



Claim 8 (original): The catalyst according to claim 1 wherein Pd is in the range of from 0.01% to 0.3% by weight; Ni is in the range of from 0 to 10% by weight; Ag is in the range of 0.005 to 5% by weight; Zn is in the range of 0.002 to 1% by weight and Bi is in the range of 0.01 to 3% by weight.

Claim 9 (currently amended): The catalyst according to claim 6 wherein the content of K is less ~~that~~ than 0.5 % by weight.

Claim 10 (original): The catalyst according to claim 5 wherein said support is alumina having a BET surface area of 10 to 100 m²/g.

Claim 11 (original): The catalyst according to claim 10 wherein said support has a BET surface area of 20 to 70 m²/g.

Claim 12 (currently amended): The catalyst according to claim 5 wherein said alumina support ~~is of~~ comprises shaped transition alumina having an apparent bulk density of between 0.7-0.8 g/cm³ and having mixed crystalline forms of α , κ , θ , δ , ρ , η , γ , and χ

Claim 13 (withdrawn): A process for the selective hydrogenation of unsaturated compounds comprising contacting a feed containing unsaturated compounds comprising acetylenes, diolefins and olefins in at least partial liquid phase with hydrogen in the presence of a catalyst according to claim 1 to selectively hydrogenate acetylenes, diolefins, or olefins.

Claim 14 (withdrawn): A process for the selective hydrogenation of unsaturated compounds comprising contacting a feed containing unsaturated compounds

comprising acetylenes, diolefins and olefins in at least partial liquid phase with hydrogen in the presence of a catalyst according to claim 2 to selectively hydrogenate acetylenes, diolefins, or olefins.

Claim 15 (withdrawn): A process for the selective hydrogenation of unsaturated compounds comprising contacting a feed containing unsaturated compounds comprising acetylenes, diolefins and olefins in at least partial liquid phase with hydrogen in the presence of a catalyst according to claim 3 to selectively hydrogenate acetylenes, diolefins, or olefins.

CA Claim 16 (withdrawn): A process for the selective hydrogenation of unsaturated compounds comprising contacting a feed containing unsaturated compounds comprising acetylenes, diolefins and olefins in at least partial liquid phase with hydrogen in the presence of a catalyst according to claim 5 to selectively hydrogenate acetylenes, diolefins, or olefins.

Claim 17 (withdrawn): A process for the selective hydrogenation of unsaturated compounds comprising contacting a feed containing unsaturated compounds comprising acetylenes, diolefins and olefins in at least partial liquid phase with hydrogen in the presence of a catalyst according to claim 7 to selectively hydrogenate acetylenes, diolefins, or olefins.

Claim 18 (withdrawn): A process for the selective hydrogenation of unsaturated compounds comprising contacting a feed containing unsaturated compounds comprising acetylenes, diolefins and olefins in at least partial liquid phase with



hydrogen in the presence of a catalyst according to claim 8 to selectively hydrogenate acetylenes, diolefins, or olefins.

Claim 19 (withdrawn): A process for the selective hydrogenation of unsaturated compounds comprising contacting a feed containing unsaturated compounds comprising acetylenes, diolefins and olefins in at least partial liquid phase with hydrogen in the presence of a catalyst according to claim 11 to selectively hydrogenate acetylenes, diolefins, or olefins.

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Claim 20 (withdrawn): A process for the selective hydrogenation of unsaturated compounds comprising contacting a feed containing unsaturated compounds comprising acetylenes, diolefins and olefins in at least partial liquid phase with hydrogen in the presence of a catalyst according to claim 12 to selectively hydrogenate acetylenes, diolefins, or olefins.
